UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/575,129	05/23/2000	Paul Lapstun	NPT002US	9175

			EXAMINER
24011	7590	08/04/2004	JORGENSEN, LELAND R

SILVERBROOK RESEARCH PTY LTD
393 DARLING STREET
BALMAIN,   204
AUSTRALIA

ART UNIT	PAPER NUMBER
2675	

DATE MAILED: 08/04/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

	Application No.		Applicant(s)	
Office Action Summary	09/575,129		LAPSTUN ET AL.	
	Examiner		Art Unit	
	Leland R. Jorgensen		2675	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *23 May 2000*.
2a)☐ This action is **FINAL.**   2b)☒ This action is non-final.
3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1 - 176* is/are pending in the application.
    4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5)☐ Claim(s) _____ is/are allowed.
6)☒ Claim(s) *1 - 176* is/are rejected.
7)☐ Claim(s) _____ is/are objected to.
8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.
10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.
    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
    a)☒ All b)☐ Some * c)☐ None of:
      1.☒ Certified copies of the priority documents have been received.
      2.☐ Certified copies of the priority documents have been received in Application No. _____.
      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
      application from the International Bureau (PCT Rule 17.2(a)).
    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)
2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3)☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date *3*.

4)☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ .
5)☐ Notice of Informal Patent Application (PTO-152)
6)☐ Other: _____.

DETAILED ACTION

Claim Objections

Claims 25, 101 – 105, and 164 - 176

1.   Claims 25, 101 – 105, and 164 - 176 are objected to under 37 CFR 1.75(c) as being in improper form because a multiple dependent claim cannot dependent on any other multiple dependent claim. See MPEP § 608.01(n). Accordingly, these claims have not been further treated on the merits.

Claim Rejections - 35 USC § 103

2.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3.   Claims 1 - 6, 11 – 13, 79 – 89, and 92 - 96 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bennett et al., USPN 5,051,736 in view of Lesnick et al., USPN 4,760,606.

Claims 1, 4, 82, and 86

Bennett describes a method of enabling user interaction with computer software running in a computer system having an interface surface [passive table 1] containing information relating to the computer software and including coded data [Tablet Addressing Cell (TAC)] indicative of at least one reference point of the interface surface; and a sensing device [optical stylus 10] which, when placed in an operative position relative to the interface surface, uses at least some of the coded data to sense indicating data indicative of a position [X-Y data] of the

sensing device relative to the interface surface. Bennett, col. 5, lines 2 – 33; col. 9, line 53 – col. 10, line 3; and figures 1 and 6 – 8. The method including the steps of, in the computer system: (a) receiving the indicating data from the sensing device; (b) using the indicating data to identify at least one interactive element relating to the computer software; and (c) operating the computer software in accordance with instructions associated with the at least one interactive element. Bennett, col. 11, lines 42 – 58; col. 12, lines 25 – 62; and figures 11 – 15.

Bennett does not specifically teach a that the coded data is indicative of an identity of the interface surface and that the sensing device uses at least some of the coded data to sense indicating data indicative of the identity of the interface surface.

Lesnick teaches an interface surface [document 102, specifically sample header page 600] containing information relating to the computer software and including coded data is indicative of an identity of the interface surface [bar code 106] and a sensing device [scanner or single processing means 106 or document processing or scanner means 126] that uses at least some of the coded data to sense indicating data indicative of the identity of the interface surface. Lesnick, col. 4, lines 32 – 40; and figures 1 and 6. Lesnick also teaches a method of (a) receiving the indicating data from the sensing device; (b) using the indicating data to identify at least one interactive element [boxes 652 – 664] relating to the computer software; and (c) operating the computer software in accordance with instructions associated with the at least one interactive element. Lesnick, col. 5, line 6 – col. 6, line 15; col. 11, lines 38 – 44; and figures 4 and 6.

It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the coded data indicative of the identity of the interface surface as taught by Lesnick with the method and system taught by Bennett as to properly identify the document before

performing any software operations on with the data obtained from the document. Lesnick

invites such combination by teaching,

> Accordingly, it is a principal object of this invention to provide an efficient means of digitizing multiple specimens (or documents).

> Also, it is an object of this invention to greatly reduce the need for user dependency, and thus increase automation, during the digitizing process.

> Further, it is an object of this invention is to efficiently classify and file the digitized documents.

Lesnick, col. 1, lines 33 – 40.

Claims 2, 5, 83, and 87

Bennett teaches that the interactive element is associated with a zone of the interface

surface [matrix of squares called Tablet Addressing Cell (TAC)], and step (b) includes using the

position of the sensing device to identify the zone and thereby the interactive element. Bennett,

col. 9, lines 53 – col. 10, line 55; and figure 15.

Claims 3, 6, 84, and 88

Bennett teaches that the sensing device generates movement data indicative of its

movement relative to the interface surface, using at least some of the coded data, the method

including the step of receiving, in the computer system, the movement data wherein step (b)

includes using the movement data to identify the zone. Bennett, col. 1, lines 6 – 12; col. 3, lines

9 – 13; and col. 5, lines 5 – 21.

Claims 11 - 13 and 94 - 96

Lesnick teaches that the interactive element is a checkbox field relating to the computer

software and identifying, in the computer system, that the user has entered a hand-drawn mark

by means of the sensing device and effecting, in the computer system, an operation associated

with the checkbox field. Lesnick, figure 6.

Claim 79

Bennett teaches that, using a string of 11 bits, the number of unique TAC address is about

45 billion. Bennett, col. 10, lines 50 – 55. It would have been obvious to one of ordinary skill in

the art at the time of the invention to increase the string length of Bennett to increase the number

of unique TAC addresses to 10^{15} to provide increase resolution if needed.

Claims 80 and 81

Bennett teaches that each TAC has a size of 250 by 250 microns which is smaller than 10

millimeters. Thus, any 10 millimeter diameter subregion of the region includes sufficient coded

data to identify the region. Bennett, col. 15, lines 28 – 52.

Claims 85 and 89

Both Bennett and Lesnick teach a sensing device. Bennett, figure 1. Lesnick, figure 1.

Claim 92 and 93

Lesnick teaches that data indicative of a name and/or value of at least one field related to

the computer software and of a selected object. Lesnick, figure 6.

4.   Claims 7 – 10, 90, and 91 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Bennett et al. in view of Lesnick et al. as applied to claims 1, 4, 82, and 86 above, and further in

view of Stork et al., USPN 5,781,914.

Claim 7, 8, 90, and 91

Neither Bennett nor Lesnick teach a hyperlink element.

Stork teaches a hyperlink element relating to the computer software and a method

including the step of effecting, in the computer system, an operation associated with the

hyperlink element. Stork, col. 1, lines 7 – 12; col.5, lines 60 – 64; col. 7, lines 18 – 26; and

figure 2.

It would have been obvious to one of ordinary skill in the art at the time of the invention

to combine the hyperlink element as taught by Stork with the method and system as taught by

Bennett and Lesnick to produce a method and system capable of retaining hyperlink elements

during a hardcopy to digital encoding of a document. Stork invites such combination by

teaching,

> The "World Wide Web" (hereinafter referred to as "the Web") is a term
> that describes the interconnected, on-line documents that can be accessed via
> computer systems hooked to the Internet using software clients. In the prior art,
> these software clients are graphical browsers, such as Mosaic and Netscape, that
> permit a user to select various documents. Upon selection, a graphical browser
> retrieves the documents and provides them to the user, either by displaying them
> on a display screen or by causing them to be printed on a hardcopy device, such
> as a printer, or in case where the linked document is an audio file or a movie file,
> the browser enables appropriate vendition.
>
> Portions of documents displayed using the graphical browser contain
> hypertext links. The hypertext links link graphics or text on one document with
> another document on the Web. Documents containing hypertext links are created
> prior to their "publishing" on the Web. That is, a document that is to be published
> is provided to a server which creates the document and, essentially, publishes the
> document by permitting its access by others on the Web. Each hypertext link is
> associated with a Uniform Resource Locator (URL) that identifies and locates a
> document on the Web. When a user selects a hypertext link, using, for instance, a
> cursor, the graphical browser retrieves the corresponding (or linked) document(s).

Stork, col. 1, lines 16 – 40. Stork adds,

> The present invention provides a method and apparatus for generating
> electronic documents from a hardcopy document, and vice versa. A hardcopy
> document contains encoded link information and one or more regions designated
> to be active that are associated with the encoding link information. The hardcopy
> document is scanned and the scanned information is converted into an electronic

version of the hardcopy document having active regions. Each active region is
linked to electronic information, such that selection of an active region accesses
linked electronic information.

Stork, col. 2, lines 16 – 26.

Claim 9 and 10

Lesnick teaches that data indicative of a name and/or value of at least one field related to

the computer software and of a selected object. Lesnick, figure 6.

5.   Claims 14 – 17 and 97 – 100 are rejected under 35 U.S.C. 103(a) as being unpatentable

over Bennett et al. in view of Lesnick et al. as applied to claims 1, 4, 82, and 86 above, and

further in view of Tran et al., USPN 6,157,935.

Claim 14 – 17 and 97 - 100

Neither Bennett nor Lesnick specifically teach that entering handwritten text data.

Tran teaches that the interactive element is a text field relating to the computer software

and identifying and converting, in the computer system, that the user has entered handwritten

text data by means of the sensing device and effecting, in the computer system, an operation

associated with the text field. Tran, col. 2, lines 53 – 56; and col. 11, line 3 – col. 12, line 14.

It would have been obvious to one of ordinary skill in the art at the time of the invention

to combine the handwritten text data system and method as taught by Tran with the method and

system as taught by Bennett and Lesnick to produce such system and method that would utilize

easily entered handwritten notations on a hardcopy document. Tran invites such combination by

teaching,

> Additionally, the user had to master many complex and arbitrary
> operations. For example, to find the proper commands, the user needed to traverse
> several nodes of a menu. Advances in computer technology had not simplified life

for users, since these advances have been largely employed to build more complex functions and modeling capability into the spreadsheet with even more menus and sub-menus. Since the alternative of perusing through a staggering array of incomprehensible icons was not also palatable to users, most users only used a fraction of the available commands and features. Furthermore, conventional computerized spreadsheets and databases still required users to manually enter the information.

Additionally, applications such as spreadsheets, databases, project planning tools and CAD/CAM systems required large display areas to quickly and conveniently interact with users. However, portable computing appliances must balance the conflicting requirements of the readability of the displayed characters and the size of their display screens. On one hand, the portability requirement implied that the screen be small. On the other hand, the readability requirement pushed in the opposite direction and dictated that the display area be as large as possible. However, as computing appliances with large screens consumed more power, were more fragile, expensive and bulkier, most portable computers offered only a small display surface. The selection of a small display size restricted the user into making undesirable choices between displaying either larger characters or mote information. For busy executives, attorneys, doctors and other professionals, such restrictions were impractical. Thus, the display system need to be portable, cost effective, and easy to use in comparison with the pen and paper approach before the conventional pen and paper method can be replaced.

In addition to being as easy to use as the pen and paper approach, the portable computing appliance needed to provide information integration advantages, including the ability to capture data from scanners, barcode readers, or the Internet, over the cheaper pen and paper approach to further justify the expense associated with such electronic computer systems. Furthermore, as portable computers are typically deployed in field applications by service providers where employees are scattered over a wide geographic area, the information advantages arising from integrating data associated with a global positioning system (GPS) are needed in the management and control of field personnel to ensure that the employees are actually at the respective expected locations. Additionally, an ability to link information generated at the client's site with follow-up discussions and letters necessary to close the transaction is needed to enhance the efficiency of field personnel.

Tran, col. 1, line 60 – col. 2, line 50.

6.   Claims 18 – 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bennett et

al. in view of Lesnick et al. as applied to claims 1, 4, 82, and 86 above, and further in view of

Obata et al., USPN 6,002,783.

Claims 18 - 22

Neither Bennett nor Lesnick specifically teach an operation associated with a signature

field.

Obata teaches identifying, in the computer system, that the user has entered a handwritten

signature by means of the sensing device and effecting, in the computer system, an operation

associated with the signature field. Obata, col. 5, lines 16 – 49; and figure 3.

It would have been obvious to one of ordinary skill in the art at the time of the invention

to combine the signature field of Obata with the method and system as taught by Bennett and

Lesnick to produce a system and method to inexpensively verify the user. Obata invites such

combination by teaching,

> There have been various object identification systems such as an image
> checking system using images of fingerprints, a voice checking system using
> voices such as voiceprints. Among them, a signature checking system using hand-
> written signatures of card carriers is considered useful because of its simple
> hardware structure, low manufacturing cost and less handling difficulty.
>
> Such signature checking systems are used in various fields. ...

Obata, col. 1, lines 23 – 34.

7.   Claims 23, 26, 29, 32, 106, 108, 112, 115, and 116 are rejected under 35 U.S.C. 103(a) as

being unpatentable over Bennett et al. in view of Lesnick et al. as applied to claims 1, 4, 82, and

86 above, and further in view of Cass, USPN 5,692,073.

Claims 23, 106, and 108

Cass teaches a drawing field related to the computer software and identifying, in the

computer system, that the user has entered a hand-drawn picture by means of the sensing device

and effecting, in the computer system, an operation associated with the drawing field. Cass, col.

14, lines 8 – 24; col. 14, line 53 – col. 15, line 32; and figures 13 - 19.

It would have been obvious to one of ordinary skill in the art at the time of the invention

to combine the on demand printing as taught by Cass with the method and system as taught by

Bennett and Lesnick to produce a system and method to more easily input computer data. Cass

invites such combination by teaching,

> A paper-based user interface can serve as a complement or substitute for
> the more conventional keyboard-mouse-display type of user interface mentioned
> earlier. A paper-based user interface is particularly appealing when the user
> interacts with a computer network directly through a multifunction device,
> without recourse to a personal computer or workstation. In this situation, the user
> can initiate a number of functions, such as document copying, facsimile,
> electronic mail, document storage, and search using a simple paper form as an
> interface. The multifunction device "reads" what is on the form and responds
> accordingly, possibly with help from the network.

Cass, col. 2, lines 17 – 28.

Claims 26 and 112

Cass teaches printing the interface surface on demand. Cass, col. 17, lines 4 – 36.

Claims 29 and 115

Cass teaches retaining a retrievable record of each interface surface printed, the interface

surface being retrievable using the identity contained in its associated coded data. Cass, col. 10,

line 12 – col. 11, line 5; col. 11, lines 15 – 33; and col. 17, lines 37 – 49.

Claims 32 and 116

Cass teaches providing sufficient coded data relating to the computer software in the

interface surface to eliminate the need for a separate display device. Cass, col. 2, lines 17 – 28;

col. 7, lines 28 – 34.

8.   Claims 24 and 107 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Bennett et al. in view of Lesnick et al. and Cass as applied to claims 23 or 106 above, and further

in view of Stork.

Claims 24 and 107

Stork teaches activating, in the computer system, a hyperlink. Stork, col. 1, lines 7 – 12;

col.5, lines 60 – 64; col. 7, lines 18 – 26; and figure 2.

9.   Claims 27 and 113 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Bennett et al. in view of Lesnick et al. and Cass as applied to claims 26 or 112 above, and further

in view of LaMarca et al., USPN 6,279,013 B1.

Claims 27 and 113

Neither Bennett, Lesnick, nor Cass specifically teach substantially simultaneously

printing the interface surface and the coded data onto a substrate.

LaMarca teaches substantially simultaneously printing the interface surface and the coded

data onto a substrate. LaMarca, col. 5, lines 4 – 12 and 34 – 40; and figures 1 and 2. LaMarca

also teaches a printer 40 for printing a document 10 and 42. LaMarca, figures 1 and 2. LaMarca

teaches a user interactive element [tokens 18, 20, 22, 24, 60, 62, 64, and 66] with coded data

[dataglyphs] indicative of an identity of the document and an identity of the at least one user

interactive element. LaMarca, col. 3, lines 59 – 64; col. 5, lines 1 – 5; col. 6, lines 1 – 8; and

figures 1 – 4. LaMarca teaches a sensing device [smart wand 70] for interacting with the at least

one user interactive element and transmitting request data to the computer system to facilitate the

further directory information being sent from the computer system to the printer for printing in a

further document, the request data being indicative of the identity of the document and an

identity of the at least one user interactive element. LaMarca, col. 5, lines 16 – 26; col. 6, lines

24 – 52; and figure 5.

It would have been obvious to one of ordinary skill in the art at the time of the invention

to combine simultaneous printing of the directory entries and coded data as taught by LaMarca

with the method and system for navigating a directory as taught by Cass. LaMarca invites such

combination by teaching,

> The present invention contemplates a new and improved system which
> overcomes the prolix disadvantages of mass media print communication to
> effectively combine the advantageous features of the two relevant technologies.
> That is, the customized newspaper which can now be read on an electronic
> display, is combined with the affordances and conveniences of a printed paper
> interface, for a resulting interactive newspaper, customized to a subscriber-
> identified profile.

LaMarca, col. 1, line 65 – col. 2, line 6. LaMarca teaches the following benefits.

> One benefit obtained by use of the present invention is a customizable
> push system for a mass media document so that readers can adjust by general
> subject matter what content is presented in subsequent editions of the document.

> Another benefit obtained from the subject invention is the provision of a
> document which is customized to a reader, and thereby comprises a much more
> efficient presentation, paper consumption and time investment to a reader in
> ultimately reviewing the document.

> A further benefit of the subject invention is back channel communication
> from a class of readers to a publisher on the relative interest of a plurality of
> selected items in the document or a response to explicit questions for the reader,
> whereby the publisher can have an appreciation of reader interest in different
> articles and responses to specific questions.

Yet another benefit of the present invention is a convenient vehicle for the subscriber to solicit more detailed or expanded information on a subject only first generally identified by the publisher.

LaMarca, col. 2, line 64 – col. 3, line 17.

10.   Claims 28 and 114 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Bennett et al. in view of Lesnick et al. as applied to claim 82 or 86 above or over and Bennett et

al. in view of Lesnick et al., Cass, and LaMarca et al. as applied to claims 27 above, and further

in view of Dymetman et al, USPN 6,330,976 B1.

Claims 28 and 114

Neither Bennett, Lesnick, Cass, nor LaMarca specifically teach that the coded data is

printed onto the surface to be substantially invisible to an unaided human eye.

Dymetman teaches that the coded data is printed onto the surface to be substantially

invisible to an unaided human eye. Dymetman, col. 11, line 46 – col. 12, line 28; col. 12, lines

59 – 67; and figure 4.

It would have been obvious to one of ordinary skill in the art at the time of the invention

to combine receiving movement data about the position of the sensing device as taught by

Dymetman with the method and system of by Bennett and Lesnick or of Bennett, Lesnick, Cass

and LaMarca to present the information in a way that does not disturb the document appearance.

Dymetman invites such combination by teaching,

The invention provides techniques that alleviate these problems. The techniques employ action/medium identifiers encoded in machine-readable markings on marking media such as sheets or stickers of paper or documents. Each action/medium identifier identifies an action. The action/medium identifier can be used to obtain an action identifier that can be provided through a network to an action device to produce the action. The action device provides the identified action automatically in response to the action identifier. The

action/medium identifier also identifies the marking medium. Because the action/medium identifier identifies both the marking medium and the appropriate automatic action, the marking medium can be used to obtain the appropriate automatic action in a non-disruptive streamlined manner. The user can obtain the automatic action in a way that does not disturb normal reading activity and does not disturb document appearance.

Dymetman, col. 3, lines 22 - 38.

11.   Claims 30 and 117 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Bennett et al. in view of Lesnick et al. as applied to claims 1, 4, 82, and 86 above, and further in

view of Microsoft Press Computer Dictionary, 3rd Ed ((1997).

Claims 30 and 117

Neither Bennett nor Lesnick teach multicast or pointcast communications protocols,

Microsoft Press Computer Dictionary teaches multicast and pointcast communications

protocols. Microsoft Press Computer Dictionary, pp. 300, 318, and 371.

It would have been obvious to one of ordinary skill in the art at the time of the invention

to combine

12.   Claims 31, 110, and 111 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Bennett et al. in view of Lesnick et al. as applied to claims 1, 4, 82, and 86 above, and further in

view of Junod et al., USPN 5,854,621.

Claims 31, 110, and 111

Neither Bennett nor Lesnick teach that the sensing device containing an identification

means that imparts a unique identity to the sensing device and identifies it as belonging to a

particular user, wherein the method includes the step of monitoring, in the computer system, said

identity.

Junod teaches that the sensing device containing an identification means that imparts a

unique identity to the sensing device and identifies it as belonging to a particular user, wherein

the method includes the step of monitoring, in the computer system, said identity. Junod, col. 5,

lines 34 – 53; and figure 4.

It would have been obvious to one of ordinary skill in the art at the time of the invention

to combine the sensing device identifier as taught by Junod with the sensing device as taught by

Bennett and Lesnick. Junod invites such combination by teaching,

> As the range of wireless transmission increases, a continuing problem with
> the prior art is the simultaneous operation of multiple wireless peripherals which
> are transmitting to different host computer systems. These peripherals can have
> conflicting transmission signals, while the peripherals are in transmission range of
> each other.

> There has also been a need in the art to have a wireless receiver which can
> receive information from more than one peripheral device, such as receiving
> cursor information from both a wireless mouse and a wireless pointing device
> used for software presentations.

> As a result, there has been a need for a communications device which
> would permit elimination of the cable connection between the mouse and the
> receiver, while at the same time permitting an inexpensive, reliable and
> continuous communication between the mouse and the receiver. There has also
> been a comparable need for a similar communications interface between the host
> and other peripherals, such as trackballs, keyboards, digitizing tablets, etc. There
> has further been a need for a communications interface which can differentiate
> between multiple wireless devices used on different computers and can also allow
> more than one wireless device to transmit information to the same computer.

Junod, col. 1, line 57 – col. 2, line 13. Junod concludes,

> As can be appreciated from the foregoing, the omnidirectional
> transmission of the signal from the transmitter in the mouse 10 to the host adapter
> 20 eliminates most concerns about obstacles in the transmission path while at the
> same time permitting significantly improved freedom for the user by eliminating

any mechanical connection from the mouse 10 to the host system 30. In addition,
the identification code information and the ability to choose multiple transmission
channels upon which to transmit avoids most concerns of radio interference with
other devices in the environment. It will be appreciated that the present invention
also provides a method and means for receiving signals from more than one
wireless peripheral device and that it minimizes power consumption at the
transmitting end. It can further be appreciated that this same interface, while
described here in detail only in connection with an electronic mouse, can similarly
be used with numerous other peripherals.

Junod, col. 9, lines 48 – 64.

13.   Claims 33 and 118 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Bennett et al. in view of Lesnick et al. as applied to claim 1 or 4 above or over and Bennett et al.

in view of Lesnick et al. and Cass, as applied to claims 112 above, and further in view of

Kobayashi et al, USPN 5,881,352.

Claims 33 and 118

Neither Bennett, Lesnick, nor Cass teach that wherein the interface surface is printed on

multiple pages, the method including the step of binding the pages.

Kobayashi et al teaches a means for binding the document in the event the document

includes a plurality of pages. Kobayashi, col. 1, lines 7 – 21.

It would have been obvious to one of ordinary skill in the art at the time of the invention

to combine the binder of Kobayashi with the system of Cass. Such combination provides easy

binding of collected sheets and covers without manual labor. Kobayashi, col. 2, lines 36 – 48.

14.   Claims 34 – 36, 38 - 46, 49 – 55, 65 – 78, 119 – 121, 123 - 131, 134 – 140, 150 - 163 are

rejected under 35 U.S.C. 103(a) as being unpatentable over Bennett et al. in view of Lesnick et

al. as applied to claims 1, 4, 82, and 86 above, and further in view of Dymetman et al., USPN

6,330,976 B1.

Claims 34 and 119

Bennett nor Lesnick and teach that the coded data includes at least one tag. Neither

Bennett nor Lesnick specifically teach that each tag is indicative of the identity of the region and

the position of the tag within the region.

Dymetman teaches that each tag is indicative of the identity [page identifier (pid) or

sticker identifier (pid')] of the region and the position [location code (loc or loc')] of the tag

within the region. Dymetman, col. 9, lines 16 – 22.

For the reasons stated in the discussion of claims 28 and 114 above, it would have been

obvious to one of ordinary skill in the art at the time of the invention to combine the tag as taught

by Dymetman with the system and method taught by Bennett and Lesnick to produce a method

and system more responsive to information available.

Claims 35 and 120

Dymetman teaches that each of the tags includes first identity data defining a relative

position [location code (loc or loc')] of that tag; and second identity data identifying the

surface[page identifier (pid) or sticker identifier (pid')].

Claims 36 and 121

It is inherent that the surfaces described by either Bennett, Lesnick, or Dymetman may be

defined by a substrate. See e.g. Bennett, col. 5, lines 5 – 8 and col. 5, line 63 – col. 6, line 17.

Claims 38 – 43, 73 – 77, 123 – 128, and 158 - 162

Bennett, Lesnick, and Dymetman show these patterns. See Bennett, figures 6 – 10;

Lesnick, figure 12; and Dymetman, figures 3 and 5B – 10.

Claims 44 and 129

Dymetman teaches that each of the each of the tags [zone or cell 202] includes at least one common feature [orientation marker 206] in addition to the second identity data [first set of markings 208 that identifies the page]. (The first identity data corresponds to the second set of markings 202 that identifies the position on the page.) Dymetman, col. 12, lines 30 – 46; and figure 3.

Claims 45 and 130

Dymetman teaches the orientation marker 206 that is configured to assist finding and/or recognition of the tags by associated tag reading apparatus. Dymetman, col. 12, lines 30 – 46; and figure 3.

Claims 46 and 131

Dymetman shows that each cell [zone or cell 202] has a orientation marker, thus incorporating redundancy of information. Dymetman, col. 12, lines 30 – 46; and figure 3.

Claims 49 and 134

Dymetman teaches that each of the tags [zone or cell 202] includes at least one orientation feature [orientation marker 206] for enabling a rotational orientation of the tag being read to be ascertained. Dymetman, col. 12, lines 30 – 46; and figure 3.

Claims 50 and 135

Dymetman shows that each cell [zone or cell 202] has a orientation marker, thus incorporating redundancy of information. Dymetman, col. 12, lines 30 – 46; and figure 3.

Claims 51 and 136

Dymetman shows a pattern in figure 3 where the orientation features are rotationally asymmetric.

Claims 52 and 137

Dymetman shows identifiers that are skewed along a major axis. Dymetman, figure 5B.

It would have been obvious to one of ordinary skill in the art at the time of the invention to use

the same skewing for the orientation feature.

Claims 53, 54, 138, and 139

Bennett teaches includes perspective feature for enabling a perspective distortion of the

tag being read to be ascertained. Bennett, col. 11, lines 59 – 62.

Claims 55 and 140

Dymetman teaches that each tag [zone or cell 202] includes a plurality of tag elements,

the first [second set of markings 202 that identifies the position on the page] and second identity

data [first set of markings 208 that identifies the page] each being defined by a plurality of the

elements. Dymetman, col. 12, lines 30 – 46; and figure 3.

Claims 65 and 150

Dymetman shows that each cell [zone or cell 202] has first identify data [second set of

markings 202 that identifies the position on the page], thus incorporating redundancy of

information. Dymetman, col. 12, lines 30 – 46; and figure 3.

Claims 66 and 151

Dymetman shows that each cell [zone or cell 202] has second identify data [first set of

markings 208 that identifies the page], thus incorporating redundancy of information.

Dymetman, col. 12, lines 30 – 46; and figure 3.

Claims 67 and 152

Lesnick teaches that the tags are printed onto the surface by means of a printer [122 or

214]. Lesnick, col. 4, lines 7 – 9; and figures 1 & 2. It is inherent to both Bennett and

Dymetman that the tags are printed out onto the surface by means of a printer.

Claims 68 and 153

Dymetman teaches that printer is an ink printer. Dymetman, col. 11,lines 63 – 65. It is

inherent that Bennett and Lesnick use an ink printer.

Claims 69 and 154

Dymetman teaches that the tags are printed using ink that is absorbent or reflective in the

ultraviolet spectrum. Dymetman, col. 11, lines 52 – 62.

Claims 70 and 155

Lesnick show that the printer also prints additional information onto the surface.

Lesnick, figure 6.

Claim 71, 72, 156, and 157

Dymetman teach that the information is printed onto the surface using colored inks,

including cyan, magenta, and yellow inks. CMY is an acronym for cyan, magenta, and yellow.

Claims 78 and 163

Lesnick shows additional non-tag information disposed on the surface. Lesnick, figure 6.

15.   Claims 37 and 122 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Bennett et al. in view of Lesnick et al. and Dymetman et al. as applied to claims 34 and 35

above, and further in view of Kaule, USPN 6,302,989 B1.

Claims 37 and 122

Bennett teaches that the surface is laminated. Bennett, col. 5, line 63 – col. 6, line 17.

Neither Bennett, Lesnick, nor Dymetman specifically teach that the substrate is laminar.

Kaule teaches a laminar substrate. Kaule, col. 3, lines 27 – 45; col. 4, lines 6 – 10; and

figure 1.

It would have been obvious to one of ordinary skill in the art at the time of the invention

to combine the laminar substrate as taught by Kaule with the method and system as taught by

Bennett, Lesnick, and Dymetman to protect the tags, that is the optically variable element, on the

surface.

16.   Claims 47, 48, 56 – 64, 109, 132, 133, and 141 - 149 are rejected under 35 U.S.C. 103(a)

as being unpatentable over Bennett et al. in view of Lesnick et al. and Dymetman et al. as

applied to claims 34 and 35 above, and further in view of Sekendur, USPN 5,477,012.

Claims 47, 48, 132, and 133

Neither Bennett, Lesnick, nor Dymetman specifically teach that the common feature is

rotationally symmetric or ring shaped.

Sekendur teaches that the a feature that is rotationally symmetric so as to be rotationally

invariant and is ring-shaped. Sekendur, col. 4, lines 28 – 41; and figures 1 – 2.

It would have been obvious to one of ordinary skill in the art at the time of the invention

to combine the ring-shaped feature as taught by Sekendur with the method and invention as

taught by Bennett, Lesnick, and Dymetman to produce compact, rotationally invariant tags.

Claims 56 and 141

Sekendur teaches that the tag elements are disposed in one or more arcuate bands around

a central region of each tag. Sekendur, col. 4, lines 28 – 41; and figures 1 – 2.

Claims 57 and 142

Sekendur teaches that there are a plurality of the arcuate bands disposed concentrically with respect to each other. Sekendur, col. 4, lines 28 – 41; and figures 1 – 2.

Claims 58, 59, 143, and 144

Sekendur shows a center circle that forms a small dot. The dot may have two values, black or white. Sekendur, col. 4, lines 28 – 41; and figures 1 – 2.

Claims 60 and 145

It is inherent to any of the systems and methods of Bennett, Lesnick, Dymetman, and Sekendur that wherein when representing one of the possible values, the tag elements absorb, reflect or fluoresce electromagnetic radiation of a predetermined wavelength or range of wavelengths to a predetermined greater or lesser extent than the surface. See e.g. Dymetman, col. 11, lines 47 – 62. See specifically Sekendur, col. 4, lines 15 – 27 and 50 – 59.

Claims 61 and 146

It is inherent to any of the systems and methods of Bennett, Lesnick, Dymetman, and Sekendur that the possible values of the tag elements are defined by different relative absorption, reflection or fluorescence of electromagnetic radiation of a predetermined wavelength or range of wavelengths. See e.g. Dymetman, col. 11, lines 47 – 62. See specifically Sekendur, col. 4, lines 15 – 27 and 50 – 59.

Claims 62 and 147

Both Dymetman and Sekendur teach that the tags are not substantially visible to an average unaided human eye under daylight or ambient lighting conditions. Dymetman col. 11, lines 47 - 62. Sekendur, col. 4, lines 26 – 27.

Claims 63 and 148

Dymetman teaches that the tags are slightly visible to an average unaided human eye

under daylight or ambient lighting conditions. Dymetman, col. 7, lines 59 – 62.

Claims 64 and 149

Dymetman teaches that the tags are visible to an average unaided human eye under

daylight or ambient lighting conditions. Dymetman, col. 11, lines 63 – 65.

Claim 109

Sekendur teaches a sensing device [pen shaped optical conduit 8] includes a marking nib

[writing element 9]. Sekendur, col. 4, line 60 – col. 15; and figures 6 & 7.

Conclusion

17.   The prior art made of record and not relied upon is considered pertinent to applicant's

disclosure.

Fahraeus, USPN 6,502,756 B1, teaches a means for recording information into a

computer using a marking surface.

18.   Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Leland Jorgensen whose telephone number is 703-305-2650. The

examiner can normally be reached on Monday through Friday, 7:00 a.m. through 3:30 p.m..

Any response to this action should be mailed to:

> Commissioner of Patents and Trademarks
> Washington, D.C. 20231

or faxed to:

> **(703) 872-9306**

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA, Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office, telephone number (703) 306-0377.

lrj

DENNIS-DOON CHOW
PRIMARY EXAMINER